hydrophilic support and a heat-sensitive layer containing a thermoplastic particulate polymer, a particulate polymer having a heat-reactive group, and a microcapsule containing a compound having a heat-reactive group incorporated therein. It is also argued that it would be obvious to one skilled in the art to use a copolymer of (meth)acrylic acid and butyl methacrylate as the particulate polymer having a heat-reactive group with a reasonable expectation of obtaining a lithographic printing plate precursor having a good on-the machine developability. Further, the Final Rejection argues that it would be obvious to use cellulose or a starch derivative or a resin containing an amino group as the hydrophilic polymer. It is thus asserted that the teaching in the reference renders obvious the subject matter of Claims 62-67 and the described heat-sensitive coating would be aqueous-ineluable when dried.

Applicants agree that Inoue et al. has considerable disclosure about hydrophobic polymers and hydrophilic polymers in the same imaging layer. What Inoue et al. fails to teach or suggest, however, is which hydrophobic polymer and hydrophilic polymers should be chosen and used in combination in a manner that provides a radiation-sensitive layer that is "aqueous-ineluable" in a dried state. As pointed out on page 9 (lines 16-22) of the present application, this means that the dried coating is not dissolved or otherwise dispersible by an aqueous eluent. Thus, unexposed regions of the imaged layer remain hydrophilic and receptive to, and unremovable by the fountain solution that is used during printing. However unexposed regions are not dissolved or removable by the fountain solution in the dried state (see lines 9-11 of page 22 of the present application). The invention of Claims 62-67 therefore provides much more flexibility in choosing a substrate for other reasons than its hydrophilicity (see lines 11-15 of page 19 of the present application).

The Examiner's assertion that the combination of a methylacrylic acid hydrophobic copolymer with some amine-functional hydrophilic polymer is inherently water-ineluable is incorrect. Water-ineluability is possible only if the hydrophobic copolymer has a sufficient amount of methacrylic acid units and the hydrophilic polymer contains a sufficient amount of amine. Such a selection of the requisite amounts of components in both polymers is contrary to the "good on-machine developability" objective taught in Inoue et al. in paragraph [009]. For a person skilled in the art, developability in this context means removability

of the unexposed coating from the non-printing hydrophilic substrate surface. Thus, there is no reasonable certainty that the heat-sensitive layer taught in Inoue et al. is inherently water-ineluable in the dried state. Such an assertion is merely speculative and not based on a clear suggestion in Inoue et al. because there are a vast number of possibilities described in that reference.

Inoue et al. has extensive teaching about the use and treatment of the preferred aluminum substrates including treatments to improve their water retention [0154]. This teaching is clearly not directed to providing a radiation-sensitive lithographic printing precursor that requires a radiation-sensitive coating that is aqueous ineluable as a dried coating. There is no appreciation in Inoue et al. of this feature from either the teaching about the substrate or the composition of the radiation-sensitive coating because there is not enough teaching about the components of the coating to know with any certainty that the dried coating obtained from the teaching in Inoue et al. would be water-ineluable.

While Inoue et al. describes a wide variety of hydrophobic and hydrophilic polymers that are used together in the imaging layer, there is no direction given to picking out only those hydrophobic polymers and hydrophilic polymers that, when combined, will provide an aqueous-ineluable coating as required by the present invention. As pointed out above, the composition of each polymer is critical to whether the composition is water-ineluable in the dried state. It would be merely serendipitous if a random combination of materials (and composition thereof) taught in Inoue et al. would have Applicants' required property. The teachings in the examples of Inoue et al. provide no guidance towards Applicants' required combination of materials and resulting property. None of the polymers described in those examples was prepared using monomers containing carboxy groups. Thus, the teaching in Inoue et al. amounts to two extensive laundry lists of polymers but omits the critical teaching or direction that would suggest putting specific polymers together from each list as Applicants have done because Inoue et al. fails to appreciate the value of having unexposed regions that are aqueous-ineluable to avoid the need for highly hydrophilic substrates.

As pointed out above, water-ineluability is possible only if the hydrophobic copolymer has a sufficient amount of methacrylic acid units and the hydrophilic polymer contains a sufficient amount of amine. Such a selection of

the requisite amounts of components in both polymers is contrary to the "good on-machine developability" objective taught in Inoue et al. in paragraph [009]. For a person skilled in the art, developability in this context means removability of the unexposed coating from the non-printing hydrophilic substrate surface.

On page 5 of the Final Rejection, the Examiner states that "there are not that many resins to choose from in the list" in reference to the long lists of hydrophobic polymers and encapsulated hydrophilic polymers.

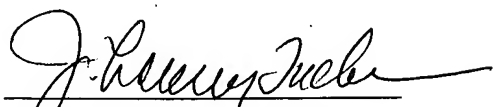
Applicants respectfully disagree. A review of the teaching in Inoue et al. relating to the particulate hydrophobic polymers in [0024]-[0028] reveals that the teaching of such polymers includes dozens of possible monomers with dozens of possible heat-reactive functional groups. Without any teaching about how much heat-reactive functional group should be present, any teaching needed to suggest water-eluable dried coatings is absent and could only be obtained using Applicants' teaching. The Examiner should appreciate that picking out Applicants' claimed composition from this extensive laundry list in Inoue et al. would require hundreds of hours of experimentation and that is clearly indicative of patentability.

Similarly, the hydrophilic polymers that may contain an amine group as taught beginning in [0035] of Inoue et al. include hundreds of possible polymer compositions and there is no direction how to choose the right ones to combine with the right particulate hydrophobic polymers from the other extensive list. This is clearly not what the Patent Statute requires to establish unpatentability.

For these reasons, Inoue et al. does not teach or suggest the subject matter of Claims 62-67 and the unpatentability rejection should be withdrawn.

In view of the foregoing remarks, reconsideration of this patent application is respectfully requested. A prompt and favorable action by the examiner is earnestly solicited.

Respectfully submitted,



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